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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/871,905	06/04/2001	Toshio Kuroiwa	24673	2128

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Washington, DC 20005

EXAMINER
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BAUM, RONALD

ART UNIT	PAPER NUMBER
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2136

DATE MAILED: 03/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/871,905	Applicant(s) KUROIWA, TOSHIO	
	Examiner Ronald Baum	Art Unit 2136	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 December 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

1. This action is in reply to applicant's correspondence of 09 December 2004.
2. Claims 1- 3 are pending for examination.
3. Claims 1- 3 are rejected.

### ***Claim Objections***

4. The Claim 2 informalities objection is withdrawn.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Park, U.S. Patent 5,689,559.

6. As per claim 1; "A master digital data creation device for supplying second digital data obtained by scrambling first digital data to a digital reproduction device having a recording medium, [figures 1-5 and accompanying descriptions, col. 11, lines 16-col. 16, line 18] comprising:

an encryption block generating a first control word based on

an allowable number of reproductions specified by the digital data reproduction

device [i.e., copy prevention] and

applying a one-way function to the first control word to produce the allowable number of reproductions to generate a second control word [col. 1, lines 57-col. 11, line 14, whereas the marker generation/encryption clearly encompasses the “specified allowable number of reproductions” and the encryption process is key based and is broadly interpreted by the examiner to encompass one way functionality.];

a scrambler receiving

the second control word for scrambling the first digital data using the second control word to produce second digital data [col. 1, lines 57-col. 11, line 14, whereas the marker generation/encryption/scrambling clearly encompasses the digital data scrambled functionality.]; and

an output block outputting

the second digital data and

the first control word to the digital data reproduction device [col. 1, lines 57-col. 11, line 14, whereas the multiplexing (i.e., figure 1) clearly encompasses the outputting data and control information externally.].”.

7. As per claim 2; “A digital data reproduction device [figures 2-5 and accompanying descriptions, col. 11, lines 16-col. 16, line 18] comprising:

an acceptor accepting recording media on which second digital data and a first control word CW<sub>k</sub> are recorded,

said first control word being generated based on a specified allowable number of reproductions [i.e., copy prevention],

said second digital data being generated by scrambling desired first digital data using a second control word  $CW_o$  generated by applying a one-way function to the first control word  $CW_k$   $k$  times [col. 1, lines 57-col. 11, line 14, whereas the marker generation/encryption/demultiplexing/decryption, etc., clearly encompasses the “specified allowable number of reproductions” and the encryption/decryption process is key based and is broadly interpreted by the examiner to encompass one way functionality.];

a decryption block receiving

the first control word  $CW_k$  and applying the one-way function to the first control word  $CW_k$   $k$  times to produce the second control word  $CW_o$ ;

a de-scrambler receiving

the second digital data and

the second control word  $CW_o$  and

de-scrambling the second digital data using the second control word  $CW_o$  to produce the first digital data [col. 1, lines 57-col. 11, line 14, whereas the marker generation/encryption/scrambling/demultiplexing/decryption, etc., clearly encompasses the digital data de-scrambled functionality.]; and

a reproduction unit reproducing the first digital data generated by said de-scrambler,

wherein, after every reproduction by said reproduction unit, said

decryption block writes a third control word  $CW(k-1)$  back to said recording

media, said third control word  $CW(k-1)$  being generated by applying the one-way

function to the first control word  $CW_k$  once, and

wherein, if the first control word  $CW_k$  received from the recording media equals the second control word  $CW_o$ ,

the de-scrambling by said de-scrambler and

the reproduction by said reproduction unit are inhibited [col.

1, lines 57-col. 11, line 14, whereas the process of verifying authority to

copy, etc., is clearly iterative from data transfer to data transfer.].”.

8. Claim 3 *additionally recites* the limitation that; “The digital data reproduction device according to claim 2,

wherein, when a desired number of reproductions,  $n$ , is received from some other reproduction device, said decryption block receives

the first control word  $CW_k$  from the recording media and,

if  $k \geq n$ ,

applies the one-way function to the first control word  $CW_k$   $(k-n)$  times to produce the third control word  $CW_n$  and

applies the one-way function to the first control word  $CW_k$   $n$  times to produce the fourth control word  $CW(k-n)$ ; and

records the fourth control word  $CW(k-n)$  on the recording media for updating,

further comprising:

an output block outputting

the second digital data recorded on the recording media., and

the third control word CWN obtained from the decryption block, to the other reproduction device.”.

The teachings of Park suggest such limitations (figures 1-5 and accompanying descriptions, col. 1, lines 57-col. 16, line 18, whereas the process of verifying authority to copy, etc., is clearly iterative from data transfer to data transfer, and further, the copy protection/ desired number of reproductions criteria is clearly application specific to the environment (i.e., “rental” media, or signal over the air transmission/reception)).

### ***Response to Amendment***

9. As per applicant’s argument concerning the lack of teaching by Park of “... digital data creation ... second digital data ... scrambling first digital data ... encryption block generating a first control word ... allowable number of reproductions specified ... applying a one-way function ... first control word to produce the allowable number of reproductions to generate a second control word ... scrambler ... second control word for scrambling the first digital data using the second control word to produce second digital data ... an output ... second digital data ... first control word ...”, the examiner has fully considered the arguments and finds them not to be persuasive. The use of the “... number of reproductions specified ...” is clearly encompassed, as broadly interpreted by the examiner, in the ‘copy prevention method and apparatus’ of Park. Therefore, the claims specifically dealing with the phrase “... number of reproductions specified ...” per se, interpreted broadly, is such that the Park aspects of the ‘copy prevention method and apparatus’, where the “... number of reproductions specified ...” is equal to ‘one’ (still a limit to a number of allowable reproductions, both from a reproduction testing during reproduction, and,

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during testing for further reproduction aspects) would therefore be applicable in the rejection, such that the rejection support references collectively encompass the said claim limitations in their entirety.

10. As per applicant's argument concerning the lack of teaching by Park of "... first control word ... second control word ... ", parameter protocols pre/post creation as a function of "...number of reproductions specified ...", the examiner has fully considered the arguments and finds them not to be persuasive. As broadly interpreted by the examiner, it would be an inherent aspect of the Park encoding/marker insertion, etc., to delineate the data control and content flow via the use of parameter based (i.e., "...number of reproductions specified ...") control word data structures.

11. As per applicant's argument concerning the lack of teaching by Park of "... one-way function ... ", the examiner has fully considered the arguments and finds them not to be persuasive. As broadly interpreted by the examiner, Park encoding/marker insertion, and particularly, the encryption aspects of Park, would clearly inherently encompass one way (i.e., cryptographic) functions.

The examiner parsing of the claim language phrases is such that interpretation of said phrases, as broadly interpreted by the examiner, *presents a vague description of the claim limitations* in that the examiner has no practical choice other than to take a broad interpretation of the claim content as necessary. The transitioning between phrases of the claim language to delineate the specific limitations via the use of 'and', 'or', or even no discernable transitioning




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per se, without sufficient punctuation (i.e., comma, semicolon, etc.), is such that multiple content interpretations, and therefore *multiple scope interpretations* are inevitable, resulting in the said 'as broadly interpreted by the examiner'. The use of said sufficient punctuation would add *specificity in the claim language* without unduly restricting the claim in a manner that departs from the inventor's inventive concept, etc.

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

  
GREGORY MORSE  
SUPERVISORY PATENT EXAMINER  
ROOM CENTER 2100

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***Conclusion***

13. Any inquiry concerning this communication or earlier communications from examiner should be directed to Ronald Baum, whose telephone number is (571) 272-3861, and whose unofficial Fax number is (571) 273-3861. The examiner can normally be reached Monday through Friday from 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh, can be reached at (571) 272-3795. The Fax number for the organization where this application is assigned is 703-872-9306.

Ronald Baum



Patent Examiner